

TABLE OF CONTENTS

Volume 192

ARTICLES

SRIVASTAVA, R. C., D. LEUTLOFF, and K. G. ROESNER / Numerical Investigations of Converging Cylindrical and Spherical Shock Waves	1
KAFOUSSIAS, N. G. / MHD Thermal-Diffusion Effects on Free-Convective and Mass-Transfer Flow over an Infinite Vertical Moving Plate	11
BASURAH, HASSAN M. / Diurnal Variation of the Linear Polarization across the H β Fraunhofer Line of the Terrestrial Atmosphere, I	21
BASURAH, HASSAN M. / Diurnal Variation of the Linear Polarization across the H α and H β Fraunhofer Lines of the Terrestrial Atmosphere, and a Detection of a 'Daylight Flash', II	35
TAKHAR, H. S. and P. C. RAM / Effects of Hall Current on Hydromagnetic Free-Convective Flow through a Porous Medium	45
ZHIYAO, YU / The Circumstellar Envelope of VX Sgr	53
SRIVASTAVA, H. M. and MING-PO CHEN / Some Unified Presentations of the Voigt Functions	63
THAKUR, C. and R. A. YADAV / Geometry of Magnetohydrostatic Equilibria	75
ASHOKA, B. N. and V. N. PADMINI / The Pulsation Period of the β Cephei-Star Nu Cen	79
KIZILOĞLU, NILGÜN / Rotational Evolution of the Sun	83
LEKAS, TH. I. and G. A. GEORGANTOPOULOS / Pulsated Hydromagnetic Flow with Free-Convection Currents and Mass Transfer along a Vertical Infinite Porous Plate	91
BEECH, MARTIN / The Projection of Fractal Objects	103
YUAN, ZHOU and XIE GUANG ZHONG / The Distinctive Feature of Relativistic Stellar Systems	113
DEB, T. K. and S. KARANJAI / Solution of the Equation of Transfer for Coherent Scattering in an Exponential Atmosphere by Busbridge's Method	127
BESTMAN, A. R. / Transient Flow of a Relativistic Radiating Gas past a Horizontal Plate	133
SIVARAM, C. and M. CAMPANELLI / Some Consequences of Quadratic Gravity for the Early Universe	141
KAMINKER, A. D., G. G. PAVLOV, and P. G. MAMRADZE / Annihilation Radiation from a Power-Law Distributed Electron-Positron Plasma on the Ground Landau Level: The Case of Low Magnetic Fields	175
BESTMAN, A. R. / Unsteady Flow of a Relativistic Radiating Gas in a Gravitational Field	201
KARANJAI, S. and T. K. DEB / Solution of the Equation of Transfer for Coherent	

TABLE OF CONTENTS

Scattering in an Exponential Atmosphere by the Method of Discrete Ordinates	209
IVANENKO, I. P. and V. V. SIZOV / Multiple Compton Scattering of Electrons in a Photon Field	219
ZHANG, X. and W. R. HU / Magnetostatic Configuration of a Confined Magnetic Flux Tube	247
MAVRAGANIS, A. G. / The Formalism of the Translational-Rotational Motion of a Rigid Body in the Field of a Gravitating and Radiating Centre	257
ROMERO, C. and A. BARROS / Brans-Dicke Cosmology and the Cosmological Constant: The Spectrum of Vacuum Solutions	263
UYANIKER, BÜLENT and HALIL KIRBIYIK / The Effect of Chemical Abundance Oscillations on the Pulsational Properties of a 5 M Hydrogen-Helium Star	275
PERDIOS, E. and V. V. MARKELLOS / Mass Ratios of Three Bodies for Stable Low-Inclination Three-Dimensional Periodic Motion	291
MATYJASEK, JERZY and MAREK ROGATKO / Cosmic Strings in Lyra Geometry	299
VYAS, D. N. and KRISHNA M. SRIVASTAVA / The Stability of Stratified Shear Flows of an Inviscid Compressible Fluid in MHD	309

LETTERS TO THE EDITOR

XING, HU / On the Exact Solutions and Invariant Rays of the Phase Plane in Brans-Dicke Theory	145
SKALSKÝ, VLADIMÍR and MIROSLAV SÚKENÍK / A Hypothetical Estimated Mass of Quark-Lepton Boson and Mass of Electron Neutrino	149
KARANJAI, S. and L. BISWAS / Solution of the Equation of Transfer with Rayleigh's Phase Function in a Thin Atmosphere	151
SOUZA, J. A. / Is the Propagation of Electromagnetic Radiation in Cosmological Backgrounds in Agreement with the Standard Model?	317
CHAKRABORTY, ASHOK KR. / Inflationary Solution in Higher Dimensions	321
FAN, J. F., G. Z. XIE, Z. M. TANG, and Y. J. WANG / The Exact Solution of Einstein's Disc	325
BEECH, MARTIN / The Solution Topology of the Eddington Quartic-Like Equation - $Y = \alpha, X^4 + X - 1$	329
RAM, SHRI and PREM SINGH / Bianchi Type-II String-Dust Universes	335

BOOK REVIEWS

Zichichi, Antonio (ed.), <i>Old and New Forces of Nature, The Subnuclear Series</i> (R. LEITNER)	157
Ferbel, Thomas (ed.), <i>Technics and Concepts of High-Energy Physics V</i> (R. LEITNER)	158
Poirier, J.-P., <i>Introduction to the Physics of the Earth's Interior</i> (T. W. HARTQUIST)	158

TABLE OF CONTENTS

Schwarz, J. H. (ed.), <i>Elementary Particles and the Universe – Essays in Honor of Murray Gell-Mann</i> (T. W. HARTQUIST)	159
Priest, E. R. and A. W. Hood (eds.), <i>Advances in Solar System Magnetohydrodynamics</i> (T. W. HARTQUIST)	159
Bray, R. J., L. E. Cram, C. J. Durrent, and R. E. Loughhead, <i>Plasma Loops in the Solar Corona</i> (T. W. HARTQUIST)	160
Lugger, Phyllis M. (ed.), <i>Asteroids to Quasars</i> (JOHN DYSON)	160
Hughes, Beams, and Jets in Astrophysics (JOHN DYSON)	161
Hoyle, F. and N. C. Wickramasinghe, <i>The Theory of Cosmic Grains</i> (D. A. WILLIAMS)	161
De Loore, B. C. (ed.), <i>Late Stages of Stellar Evolution, Computational Methods in Astrophysical Hydrodynamics</i> (JOHN DYSON)	163
Švestka, Z. and A. Uchida (eds.), <i>The Jokkoh (Solar-A) Mission</i> (C. JORDAN)	164
Corrigendum: S. Ninković, 'On the Local Value of the Asymmetric Drift', <i>Astrophysics and Space Science</i> 187 , 159–162	165
List of Forthcoming Papers	173, 339
The Use of the "SPACEKAP" Style File for Delivering Manuscripts in LaTeX	167, 341